

wherein;

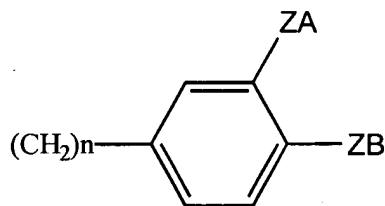
$R_6 = S$  or  $O$

$R_3$  is selected from the group consisting of  $C_1 - C_8$  linear or branched alkyl;  $C_2 - C_8$  linear or branched alkene;  $C_2 - C_8$  linear or branched alkyne;  $C_{3-8}$  cycloalkyl;  $Q$ ; and  $K$ ;

$R_8$  is selected from the group consisting of  $C_1 - C_8$  linear or branched alkyl;  $C_2 - C_8$  linear or branched alkene;  $C_2 - C_8$  linear or branched alkyne;  $C_{3-8}$  cycloalkyl;  $Q$ ; and  $K$ ;

wherein

$Q$  has the general formula:



wherein;

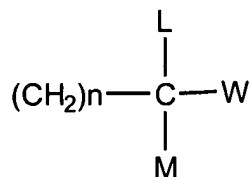
$n = 0$  or  $1$ ;

$Z =$  a bond,  $CH_2$ ,  $NH$ ,  $O$  or  $S$ ;

$A$  and  $B$  can form a ring by adding 1-3  $CH_2$  groups when  $Z = CH_2$ ,  $NH$ ,  $O$  or  $S$ ; and

$A$  and  $B$  are not in a ring when  $Z =$  a bond, wherein  $A$  and  $B$  are independently selected from the group consisting of hydrogen; halogen;  $C_1 - C_8$  alkyl;  $C_1 - C_8$  alkoxy;  $C_3 - C_8$  cycloalkyl;  $C_3 - C_8$  cycloalkoxy; hydroxy; phenyl; benzyl; and benzyloxy; wherein said phenyl, benzyl and benzyloxy are optionally substituted with halogen,  $C_1 - C_8$  alkyl,  $C_1 - C_8$  alkoxy,  $C_3 - C_8$  cycloalkyl,  $C_3 - C_8$  cycloalkoxy and hydroxy;

K has the general formula:



wherein;

$n = 0$  or  $1$ ;

L and M are independently selected from the group consisting of hydrogen and methyl;

W is selected from the group consisting of Q; hydroxy; benzyloxy optionally substituted with halogen,  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_1 - \text{C}_8$  alkoxy,  $\text{C}_3 - \text{C}_8$  cycloalkyl,  $\text{C}_3 - \text{C}_8$  cycloalkoxy and hydroxy; aryl; heteroaryl; and a heterocyclic ring;

provided that when  $\text{R}_3$  is methyl,  $\text{R}_8$  is not hydrogen;

and pharmaceutically acceptable salts thereof;

and at least one pharmaceutically acceptable excipient; said composition in the form of a solid dosage form selected from the group consisting of a tablet, gelcap, capsule, caplet, granule, and lozenge.

5. (Twice Amended) The pharmaceutical composition of claim 1, wherein said compound is selected from the group consisting of:

3-butyl-hypoxanthine;

3-butyl-thiohypoxanthine;

3-ethyl-hypoxanthine;

3-ethyl-thiohypoxanthine;

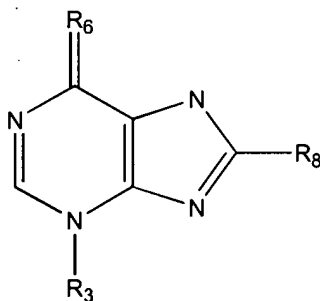
B<sup>2</sup>  
Cont

3,8-diethyl-hypoxanthine;  
3,8-diethyl-thiohypoxanthine;  
3-ethyl-8-cyclopropyl-hypoxanthine;  
3-ethyl-8-cyclopropyl-thiohypoxanthine;  
3-propyl-hypoxanthine;  
3-hexyl-hypoxanthine;  
3-hexyl-thiohypoxanthine;  
3-benzyl-hypoxanthine;  
3-benzyl-thiohypoxanthine;  
3-(4-methyl-butyl)-hypoxanthine;  
3-(4-methyl-butyl)-thiohypoxanthine;  
3-(2-methyl-butyl)-hypoxanthine;  
3-(2-methyl-butyl)-thiohypoxanthine;  
3-(3-cyclopentyloxy-4-methoxy-benzyl)-hypoxanthine;  
3-(3-cyclopentyloxy-4-methoxy-benzyl)-8-(1-hydroxy-1-methyl-ethyl)-hypoxanthine;  
3-(3-cyclopentyloxy-4-methoxy-benzyl)-8-(1-methyl-ethylene)-hypoxanthine;  
3-(3-cyclopentyloxy-4-methoxy-benzyl)-8-(1-benzyloxy-1-methyl-ethyl)-hypoxanthine;  
3-(3-cyclopentyloxy-4-methoxy-benzyl)-8-(benzyloxymethyl)-hypoxanthine;  
3-(3-cyclopentyloxy-4-methoxy-benzyl)-8-(1-methyl-ethyl)-hypoxanthine;  
3-(3-cyclopentyloxy-4-methoxy-benzyl)-8-(1-(4-methoxybenzyloxy)-1-methyl-ethyl)-  
hypoxanthine;  
3-(3-cyclopentyloxy-4-methoxy-benzyl)-8-(1-(4-fluorobenzyloxy)-1-methyl-ethyl)-  
hypoxanthine;  
3-(3-benzyloxy-4-methoxy-benzyl)-8-(1-benzyloxy-1-methyl-ethyl)-hypoxanthine;

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Contd

3-(3-4-dimethoxy-benzyl)-8-(1-benzyloxy-1-methyl-ethyl)-hypoxanthine;  
 3-(3-benzyloxy-4-methoxy-benzyl)-8-(1-methyl-ethyl)-hypoxanthine;  
 3-(3-hydroxy-4-methoxy-benzyl)-8-(1-methyl-ethyl)-hypoxanthine;  
 3-(3-4-dimethoxy-benzyl)-8-(1-methyl-ethyl)-hypoxanthine;  
 3-(1,3-benzdioxole-5-methyl)-8-(1-methyl-ethyl)-hypoxanthine;  
 3-(4-chloro-benzyl)-8-(1-methyl-ethyl)-hypoxanthine;  
 3-(3-chloro-benzyl)-8-(1-methyl-ethyl)-hypoxanthine;  
 3-(4-methoxy-benzyl)-8-(1-methyl-ethyl)-hypoxanthine;  
 3-(3-4-dimethoxy-benzyl)-8-(1-(4-fluorobenzyloxy)-1-methyl-ethyl)-hypoxanthine;  
 and pharmaceutically acceptable salts thereof.

17. (Amended) A pharmaceutical composition comprising a compound of the formula:

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in an effective amount to inhibit the PDE-IV enzyme upon administration to a human patient, wherein;

$R_6 = S \text{ or } O$

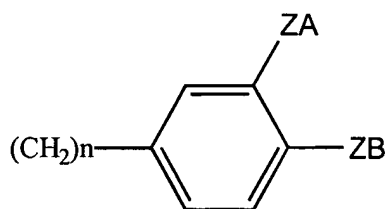
$R_3$  is selected from the group consisting of  $C_1 - C_8$  linear or branched alkyl;  $C_2 - C_8$  linear or

branched alkene;  $C_2 - C_8$  linear or branched alkyne;  $C_{3-8}$  cycloalkyl; Q; and K;

$R_8$  is selected from the group consisting of  $C_1 - C_8$  linear or branched alkyl;  $C_2 - C_8$  linear or branched alkene;  $C_2 - C_8$  linear or branched alkyne;  $C_{3-8}$  cycloalkyl; Q; and K;

wherein

Q has the general formula:



wherein;

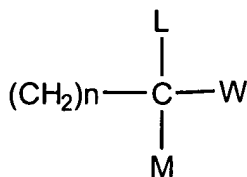
$n = 0$  or  $1$ ;

$Z =$  a bond,  $CH_2$ ,  $NH$ ,  $O$  or  $S$ ;

$A$  and  $B$  can form a ring by adding  $1-3 CH_2$  groups when  $Z = CH_2$ ,  $NH$ ,  $O$  or  $S$ ; and

$A$  and  $B$  are not in a ring when  $Z =$  a bond, wherein  $A$  and  $B$  are independently selected from the group consisting of hydrogen; halogen;  $C_1 - C_8$  alkyl;  $C_1 - C_8$  alkoxy;  $C_3 - C_8$  cycloalkyl;  $C_3 - C_8$  cycloalkoxy; hydroxy; phenyl; benzyl; and benzyloxy; wherein said phenyl, benzyl and benzyloxy are optionally substituted with halogen,  $C_1 - C_8$  alkyl,  $C_1 - C_8$  alkoxy,  $C_3 - C_8$  cycloalkyl,  $C_3 - C_8$  cycloalkoxy and hydroxy;

K has the general formula:



wherein;

n = 0 or 1;

L and M are independently selected from the group consisting of hydrogen and methyl;

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contd  
W is selected from the group consisting of Q; hydroxy; benzyloxy optionally substituted with halogen, C<sub>1</sub> – C<sub>8</sub> alkyl, C<sub>1</sub> – C<sub>8</sub> alkoxy, C<sub>3</sub> – C<sub>8</sub> cycloalkyl, C<sub>3</sub> – C<sub>8</sub> cycloalkoxy and hydroxy; aryl; heteroaryl; and a heterocyclic ring;

provided that when R<sub>3</sub> is methyl, R<sub>8</sub> is not hydrogen;

and pharmaceutically acceptable salts thereof,

and a pharmaceutically acceptable excipient;

said composition in the form of a liquid dosage form selected from the group consisting of emulsions and suspensions.

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20. (Amended) The pharmaceutical composition of claim 17, wherein said compound is selected from the group consisting of:

3-butyl-hypoxanthine;

3-butyl-thiohypoxanthine;

3-ethyl-hypoxanthine;

3-ethyl-thiohypoxanthine;

3,8-diethyl-hypoxanthine;

3,8-diethyl-thiohypoxanthine;

3-ethyl-8-cyclopropyl-hypoxanthine;

3-ethyl-8-cyclopropyl-thiohypoxanthine;

3-propyl-hypoxanthine;

3-hexyl-hypoxanthine;

3-hexyl-thiohypoxanthine;  
 3-benzyl-hypoxanthine;  
 3-benzyl-thiohypoxanthine;  
 3-(4-methyl-butyl)-hypoxanthine;  
 3-(4-methyl-butyl)-thiohypoxanthine;  
 3-(2-methyl-butyl)-hypoxanthine;  
 3-(2-methyl-butyl)-thiohypoxanthine;  
 3-(3-cyclopentyloxy-4-methoxy-benzyl)-hypoxanthine;  
 3-(3-cyclopentyloxy-4-methoxy-benzyl)-8-(1-hydroxy-1-methyl-ethyl)-hypoxanthine;  
 3-(3-cyclopentyloxy-4-methoxy-benzyl)-8-(1-methyl-ethylene)-hypoxanthine;  
 3-(3-cyclopentyloxy-4-methoxy-benzyl)-8-(1-benzyloxy-1-methyl-ethyl)-hypoxanthine;  
 3-(3-cyclopentyloxy-4-methoxy-benzyl)-8-(benzyloxymethyl)-hypoxanthine;  
 3-(3-cyclopentyloxy-4-methoxy-benzyl)-8-(1-methyl-ethyl)-hypoxanthine;  
 3-(3-cyclopentyloxy-4-methoxy-benzyl)-8-(1-(4-methoxybenzyloxy)-1-methyl-ethyl)-  
 hypoxanthine;  
 3-(3-cyclopentyloxy-4-methoxy-benzyl)-8-(1-(4-fluorobenzyloxy)-1-methyl-ethyl)-  
 hypoxanthine;  
 3-(3-benzyloxy-4-methoxy-benzyl)-8-(1-benzyloxy-1-methyl-ethyl)-hypoxanthine;  
 3-(3-4-dimethoxy-benzyl)-8-(1-benzyloxy-1-methyl-ethyl)-hypoxanthine;  
 3-(3-benzyloxy-4-methoxy-benzyl)-8-(1-methyl-ethyl)-hypoxanthine;  
 3-(3-hydroxy-4-methoxy-benzyl)-8-(1-methyl-ethyl)-hypoxanthine;  
 3-(3-4-dimethoxy-benzyl)-8-(1-methyl-ethyl)-hypoxanthine;  
 3-(1,3-benzdioxole-5-methyl)-8-(1-methyl-ethyl)-hypoxanthine;  
 3-(4-chloro-benzyl)-8-(1-methyl-ethyl)-hypoxanthine;

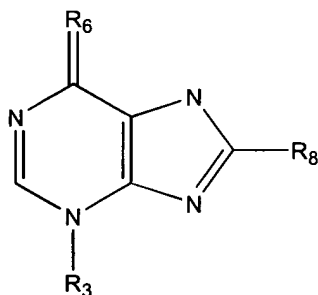
B4  
Contd

3-(3-chloro-benzyl)-8-(1-methyl-ethyl)-hypoxanthine;  
 3-(4-methoxy-benzyl)-8-(1-methyl-ethyl)-hypoxanthine;  
 3-(3-4-dimethoxy-benzyl)-8-(1-(4-fluorobenzyloxy)-1-methyl-ethyl)-hypoxanthine;  
 and pharmaceutically acceptable salts thereof.

Please add the following new claim:

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21. (New) A pharmaceutical composition comprising an active agent consisting essentially of at least one compound of the formula:



wherein;

$R_6 = S \text{ or } O$

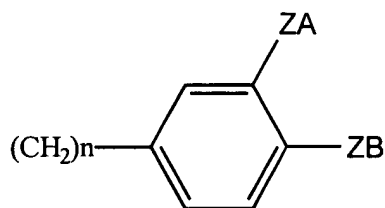
$R_3$  is selected from the group consisting of  $C_1 - C_8$  linear or branched alkyl;  $C_2 - C_8$  linear or branched alkene;  $C_2 - C_8$  linear or branched alkyne;  $C_{3-8}$  cycloalkyl; Q; and K;

$R_8$  is selected from the group consisting of  $C_1 - C_8$  linear or branched alkyl;  $C_2 - C_8$  linear or branched alkene;  $C_2 - C_8$  linear or branched alkyne;  $C_{3-8}$  cycloalkyl; Q; and K;

wherein

Q has the general formula:





wherein;

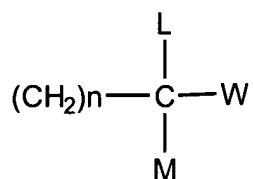
$n = 0$  or  $1$ ;

$Z =$  a bond,  $\text{CH}_2$ ,  $\text{NH}$ ,  $\text{O}$  or  $\text{S}$ ;

$A$  and  $B$  can form a ring by adding  $1-3 \text{ CH}_2$  groups when  $Z = \text{CH}_2$ ,  $\text{NH}$ ,  $\text{O}$  or  $\text{S}$ ; and

$A$  and  $B$  are not in a ring when  $Z =$  a bond, wherein  $A$  and  $B$  are independently selected from the group consisting of hydrogen; halogen;  $\text{C}_1 - \text{C}_8$  alkyl;  $\text{C}_1 - \text{C}_8$  alkoxy;  $\text{C}_3 - \text{C}_8$  cycloalkyl;  $\text{C}_3 - \text{C}_8$  cycloalkoxy; hydroxy; phenyl; benzyl; and benzyloxy; wherein said phenyl, benzyl and benzyloxy are optionally substituted with halogen,  $\text{C}_1 - \text{C}_8$  alkyl,  $\text{C}_1 - \text{C}_8$  alkoxy,  $\text{C}_3 - \text{C}_8$  cycloalkyl,  $\text{C}_3 - \text{C}_8$  cycloalkoxy and hydroxy;

$K$  has the general formula:



wherein;

$n = 0$  or  $1$ ;

$L$  and  $M$  are independently selected from the group consisting of hydrogen and methyl;